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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,113	06/04/2001	Jacky Joachim	203852US0PCT	6849
22850	7590	12/14/2006	EXAMINER	
C. IRVIN MCCLELLAND OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			GRAY, JILL M	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/786,113

Applicant(s)

JOACHIM ET AL.

Examiner

Jill M. Gray

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 5-19, 21-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of the Remand by the Board filed on July 28, 2006, PROSECUTION IS HEREBY REOPENED. The ground for rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

Remarks

The rejection of claims 15 and 19 under 35 U.S.C. 102(b) as being anticipated by Lindemann et al, 5,190,997 has been withdrawn upon further consideration.

The rejection of claims 1, 5-15, 19, 22-27, and 32 under 35 U.S.C. 103(a) as being unpatentable over Kajander 5,972,434 in view of Lindemann et al, 5,190,997 and Meng et al, 5,872,067 is withdrawn upon further consideration.

The rejection of claims 2, 16-17, 29-31, and 33-34 under 35 U.S.C. 103(a) as being unpatentable over Kajander 5,972,434 in view of Lindemann et al, 5,190,997,

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Meng 5,872,424 and PCT Publication WO 95/31411 is withdrawn upon further consideration.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 15, 19 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kennedy et al, 5,308,692 (Kennedy).

In claim 15, the language of “prepared by melting a glass or rock mineral composition, fiberizing the molten glass or mineral composition into filaments to form a mineral wool, applying a size...simultaneously or sequentially applying a hydrophilic latex...then taking up the sized mineral wool....and then thermally curing” are process limitations in a product claim. “Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 Fed. Cir. 1985. Accordingly, the product of claim 15 is an insulation product comprising mineral wool having a thermosetting resin and hydrophilic latex cured thereon. The product of claim 19 is said insulation product being thermal or acoustical insulation.

Kennedy teaches a nonwoven fiber mat comprising mineral wool coated with a thermosetting resin such as phenol-aldehyde and a thermoplastic latex that is preferably carboxylated, such as vinyl acetate, vinyl ester or acrylic acid comonomers. See column 8. In addition, at column 15, Kennedy discloses in the examples mineral wool mats with binder compositions wherein the resins used are those as prepared in Example 1, used in combination with a latex such as carboxylated vinylidene chloride/butadiene or emulsified ethylene/vinyl chloride. These latexes are the same type as disclosed by applicants as being suitable hydrophilic latexes. Accordingly, the examiner has reason to believe that the latexes of Kennedy are hydrophilic latexes. The resins of example 1 are thermosetting resins. Thus, Kennedy teaches mineral wool having a thermosetting resin and hydrophilic latex applied thereto and cured.

As to the insulation product of product-by-process claims 15 and 19, emphasis is on the final resultant product. Kennedy teaches in the background that non-woven fiber mats are utilized in numerous applications including insulating material for buildings and sound insulating material. See column 1, lines 10-15. As set forth above, Kennedy teaches a non-woven fiber mat of mineral wool having a thermosetting resin and hydrophilic latex thereon. Though Kennedy does not show a specific embodiment of an "insulation product" having a thermosetting resin and hydrophilic latex applied thereto, it is the examiner's position that Kennedy describes the claimed insulation product within the meaning of 35 U.S.C. 102. Kennedy discloses at column 3, lines 51-60 that mats according to the present invention may be applied in structural and building materials and that such utility of non-woven fibrous mats is known in this art (column 1). It is of no

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moment that Kennedy does not exemplify such insulation product. The skilled artisan is led inevitably to the conclusion that Kennedy provides a description of the claimed final resultant insulation product just as surely as if the reference exemplified such an insulation product. *In re Sivaramakrishnan*, 673, F.2d 1383, 1384-85, 213 USPQ 441, 442 (CCPA 1982) and *In re Schaumann*, 572 F.2d 312, 316-17, 197 USPQ 5, 9, (CCPA 1978).

Therefore, the teachings of Kennedy anticipate the invention as claimed in present claims 15 and 19.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 5-8, 10-14, 21, and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy et al, 5,308,692 (Kennedy) in view of Kajander 5,972,434 and Strauss et al, 5,284,700 (Strauss).

Kennedy teaches a nonwoven fiber mat comprising mineral wool coated with a thermosetting resin such as phenol-aldehyde and a thermoplastic latex that is preferably carboxylated, such as vinyl acetate, vinyl ester or acrylic acid comonomers, per claims 5 and 26. See column 8. Kennedy also teaches in the background that non-woven fiber

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mats are utilized in numerous applications including insulating material for buildings and sound insulating material (see column 1, lines 10-15) and discloses at column 3, lines 51-60 that mats according to the present invention may be applied in structural and building materials. In addition, Kennedy teaches that the fibers are produced according to well-known methods such as fiberization through a spinning disk fiberizer, but does not disclose the specific method steps of said well-known methods.

Kajander and Strauss each teach the formation of fire resistant mineral/glass fiber insulation products wherein the fibers and insulation products are produced according to conventional methods known to the art. In particular, Kajander teaches at column 12, lines 32-41, that known processes of making fiber glass insulation products comprises the steps of forming a melt, fiberizing and forming filaments, applying a binder, collecting said filaments and curing to form an insulation product. Strauss teaches a well-known method for producing glass wool comprising melting glass, spinning into filaments, collecting the formed filaments wherein a binder is applied to the filaments and the uncured glass wool is cured. See column 5, lines 25-45. Thus, the well known and conventional method steps of Kajander and Strauss render obvious the method steps of the present claims.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Kennedy by producing his filaments through any well-know and conventional method, such as those methods seen in the prior art teachings of Kajander and Strauss, said method including fiberizing molten glass to form a mineral wool, applying a binder, collecting said mineral wool and curing,

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as required by claims 1 and 13. As to the requirement of "improving the mechanical strength after ageing of an insulation product comprising mineral wool", the examiner has reason to believe that the resultant articles of Kennedy have improved mechanical strength after ageing because the prior art teaches the same, conventional process steps as applicants, utilizing a similar coating composition as required by claim 1. As to claims 6-8, 10-11 and 23-24, Kennedy teaches polymers of the type contemplated by applicants. Therefore, the examiner has reason to believe that properties such as the glass transition temperature are within the instant claimed range. As to claims 12 and 25, it would have been obvious to determine and adjust the amount of solids with respect to the weight of the mineral wool to ensure sufficient coating of the filaments and adhesion of the insulation product. Regarding claim 14, it would have been obvious to apply the latex separately from the thermosetting resin. More specifically, in the instant case, the sequential application onto a substrate of coating/binder materials that had previously been applied simultaneously, would have been an obvious variant when there is no clear necessary reaction or synergy between said materials that is solely evident or present when said components are applied simultaneously.

Accordingly, the combined teachings of Kennedy, Kajander and Strauss would have rendered obvious the invention as claimed in present claims 1, 5-8, 10-14, 21, and 23-27.

7. Claims 9, 22, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy et al, 5,308,692 (Kennedy) in view of Kajander 5,972,434 and Strauss et

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al, 5,284,700 (Strauss) each as applied above, and further in view of Lindemann et al, 5,190,997 (Lindemann).

Kennedy, Kajander and Strauss are each as set forth above, but do not teach the inclusion of a water-repellent or a colloid as set forth in claim 32. Lindemann is as set forth previously and teaches a binder composition that can be used for insulation products and glass mats, said composition comprising a thermosetting resin and a latex which can contain a protective colloid such as cellulose or polyvinyl alcohol. In addition, Lindemann teaches that his composition can contain a water-repellent agent such as silicone. Regarding claims 9 and 22, it would have been obvious to one of ordinary skill in the art to modify the composition of Kennedy by including a water-repellent agent such as silicone to protect the resultant insulation product against moisture. As to claim 32, it would have been obvious to modify the composition of Kennedy by including a protective colloid of the type contemplated by applicants for stability in the composition.

Therefore, the combined teachings of Kennedy, Kajander, Strauss and Lindemann would have rendered obvious the invention as claimed in present claims 9, 22 and 32.

8. Claims 2, 16-17, 29-31, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy et al, 5,308,692 (Kennedy) in view of Kajander 5,972,434 and Strauss et al, 5,284,700, as applied above to claims 1, 5-8,10-14, 19, 21, and 23-27, further in view of PCT Publication WO 95/31411 (the publication).

Kennedy, Kajander, and Strauss are as applied above, but are silent as to their glass fibers being capable of dissolving in a physiological medium. The publication

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teaches biologically degradable mineral fibers that can be used for insulation purposes, per claims 2 and 16 and comprises at least one alkali metal oxide in the amounts set forth by applicants in claims 29-31. See pages 2-3. While silent as to the specific rate of dissolution as required by claims 17 and 33-34, it is noted that the fibers of the publication are the same type disclosed by applicants as being suitable. Accordingly, it is the position of the examiner that this property is inherent in the fibers of the publication. It would have been obvious to use as the fibers of Kennedy mineral fibers as taught by the publication for the efficacious properties associated therewith, namely, biological degradability, temperature stability and good processability.

Therefore, the combined teachings of Kennedy, Kajander, Strauss and the publication would have rendered obvious the invention as claimed in present claims 2, 16-17, 29-31, and 33-34.

9. Claims 18, 28, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy et al, 5,308,692 (Kennedy) as applied above to claim 15, in view of PCT Publication WO 98/40437 (the publication), cited to show the state of the art.

Kennedy is a set forth above but does not teach the density of his insulation product. The publication is cited to show the general state of the art at the time the invention was made, namely, that it is known in the art that mineral wool densities varied generally between 5 and 200 kg/m³. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to produce an insulation product of the type set forth by applicants wherein the density of said

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product is within the range generally known in the art and as set forth by applicants in claims 18, 28, and 35. Moreover, this limitation is not construed to be a matter of invention in the absence of factual evidence to the contrary.

Therefore, the teachings of Kennedy in combination with the general level of ordinary skill and knowledge in the art as evidenced by the publication would have rendered obvious the invention claimed in present claims 18, 28 and 35.

Response to Arguments

10. Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.


No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jill M. Gray
Primary Examiner
Art Unit 1774

jmg



RENA DYE
SUPERVISORY PATENT EXAMINER